

SEQUENCE LISTING

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TECH CENTER 1600/2900

```
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Yednock, Ted
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peptide)

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<120> Prevention and Treatment of Amyloidogenic Disease
<130> 15270J-004750UC
<140> US 09/580,015
<141> 2000-05-26
<150> US 09/322,289
<151> 1999-05-28
<150> US 09/201,430
<151> 1998-11-30
<150> WO PCT/US00/14810
<151> 1998-11-30
<150> US 60/080,970
<151> 1998-04-07
<150> US 60/067,740
<151> 1997-12-02
<160> 77
<170> PatentIn Ver. 2.1
<210> 1
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Glu Glu Ile Ser Glu Val Lys Met Asp Ala
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      from AN1792 sequence (human Abeta42, beta-amyloid
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Glu Ile Ser Glu Val Lys Met Asp Ala Glu
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<400> 3
Ile Ser Glu Val Lys Met Asp Ala Glu Phe
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<210> 5
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Glu Val Lys Met Asp Ala Glu Phe Arg His
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 6
Val Lys Met Asp Ala Glu Phe Arg His Asp
<210> 7
<211> 10
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<400> 7
Lys Met Asp Ala Glu Phe Arg His Asp Ser
<210> 8
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Met Asp Ala Glu Phe Arg His Asp Ser Gly
<210> 9
<211> 10
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Asp Ala Glu Phe Arg His Asp Ser Gly Tyr
                  5
<210> 10
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 10
Ala Glu Phe Arg His Asp Ser Gly Tyr Glu
                  5
<210> 11
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Glu Phe Arg His Asp Ser Gly Tyr Glu Val
<210> 12
<211> 10
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<400> 12
Phe Arg His Asp Ser Gly Tyr Glu Val His
<210> 13
<211> 10
<212> PRT
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Arg His Asp Ser Gly Tyr Glu Val His His
                  5
<210> 14
<211> 10
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 14
His Asp Ser Gly Tyr Glu Val His His Gln
                  5
<210> 15
<211> 10
<212> PRT
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Asp Ser Gly Tyr Glu Val His His Gln Lys
<210> 16
<211> 10
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 16
Ser Gly Tyr Glu Val His His Gln Lys Leu
<210> 17
<211> 10
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 17
Gly Tyr Glu Val His His Gln Lys Leu Val
                  5
<210> 18
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 18
Tyr Glu Val His His Gln Lys Leu Val Phe
                  5
<210> 19
<211> 10
<212> PRT
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 19
Glu Val His His Gln Lys Leu Val Phe Phe
<210> 20
<211> 10
<212> PRT
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 20
Val His His Gln Lys Leu Val Phe Phe Ala
<210> 21
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 21
His His Gln Lys Leu Val Phe Phe Ala Glu
                  5
<210> 22
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 22
His Gln Lys Leu Val Phe Phe Ala Glu Asp
                  5
<210> 23
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 23
Gln Lys Leu Val Phe Phe Ala Glu Asp Val
<210> 24
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 24
Lys Leu Val Phe Phe Ala Glu Asp Val Gly
<210> 25
<211> 10
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Leu Val Phe Phe Ala Glu Asp Val Gly Ser
                  5
<210> 26
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 26
Val Phe Phe Ala Glu Asp Val Gly Ser Asn
                  5
<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 27
Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
<210> 28
<211> 10
<212> PRT
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 28
Phe Ala Glu Asp Val Gly Ser Asn Lys Gly
<210> 29
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: 10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 29
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
<210> 30
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 30
Glu Asp Val Gly Ser Asn Lys Gly Ala Ile
                 5
<210> 31
<211> 10
<212> PRT
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<223> Description of Artificial Sequence: 10-mer peptide
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<400> 31
Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
<210> 32
<211> 10
<212> PRT
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 32
Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
<210> 33
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 33
Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu
<210> 34
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 34
Ser Asn Lys Gly Ala Ile Ile Gly Leu Met
                  5
<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:10-mer peptide
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Asn Lys Gly Ala Ile Ile Gly Leu Met Val
<210> 36
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 36
Lys Gly Ala Ile Ile Gly Leu Met Val Gly
<210> 37
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 37
Gly Ala Ile Ile Gly Leu Met Val Gly Gly
                  5
<210> 38
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
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<400> 38
Ala Ile Ile Gly Leu Met Val Gly Gly Val
                 5
<210> 39
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 39
Ile Ile Gly Leu Met Val Gly Gly Val Val
<210> 40
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 40
Ile Gly Leu Met Val Gly Gly Val Val Ile
<210> 41
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Gly Leu Met Val Gly Gly Val Val Ile Ala
<210> 42
<211> 42
<212> PRT
<213> Homo sapiens
<223> human Abeta42 beta-amyloid peptide
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1
                                     10
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Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
Gly Leu Met Val Gly Gly Val Val Ile Ala
<210> 43
<211> 13
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:influenza
      hemagglutinin HA-307-319 universal T-cell epitope
<400> 43
Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
                  5
<210> 44
<211> 13
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: PADRE universal
      T-cell epitope
<220>
<221> misc feature
<222> (3)
<223> Xaa = Any amino acid
Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
                  5
<210> 45
<211> 16
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence:malaria CS, T3
      epitope universal T-cell epitope
Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val
                  5
                                      10
  1
<210> 46
<211> 10
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence:hepatitis B
      surface antigen HBsAg-19-28 universal T-cell
      epitope
Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile
                  5
<210> 47
<211> 19
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:heat shock
      protein 65 hsp65-153-171 universal T-cell epitope
<400> 47
Asp Gln Ser Ile Gly Asp Leu Ile Ala Glu Ala Met Asp Lys Val Gly
Asn Glu Gly
<210> 48
<211> 14
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:bacille
      Calmette-Guerin universal T-cell epitope
<400> 48
Gln Val His Phe Gln Pro Leu Pro Pro Ala Val Lys Leu
                  5
                                     10
<210> 49
<211> 15
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence:tetanus toxoid
     TT-830-844 universal T-cell epitope
Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu
<210> 50
<211> 21
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence:tetanus toxoid
      TT-947-967 universal T-cell epitope
<400> 50
Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser
                 5
                                     10
Ala Ser His Leu Glu
<210> 51
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:HIV gp120 T1
      universal T-cell epitope
<400> 51
Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala
                  5
<210> 52
<211> 22
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: AN 90549 Abeta
      1-7/tetanus toxoid 830-844
<400> 52
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                  5
Ile Gly Ile Thr Glu Leu
             20
<210> 53
<211> 28
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: AN 90550 Abeta
      1-7/tetanus toxoid 947-967
<400> 53
Asp Ala Glu Phe Arg His Asp Phe Asn Asn Phe Thr Val Ser Phe Trp
Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
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<210> 54
<211> 43
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: AN90542 Abeta
      1-7/tetanus toxoid 830-844 + 947-967
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                  5
                                     10
Ile Gly Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu
                                 25
Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
<210> 55
<211> 22
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: AN 90576 Abeta
      3-9/tetanus toxoid 830-844
<400> 55
Glu Phe Arg His Asp Ser Gly Gln Tyr Ile Lys Ala Asn Ser Lys Phe
Ile Gly Ile Thr Glu Leu
             20
<210> 56
<211> 20
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      1-7/peptide
<220>
<221> misc_feature
<222> (3)
<223> Xaa = any amino acid
<400> 56
Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Asp Ala Glu
                  5
                                     10
Phe Arg His Asp
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<210> 57
 <211> 34
 <212> PRT
 <213> Artificial Sequence
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       1-7 x 3/peptide
 <220>
 <221> misc_feature
 <222> (24)
 <223> Xaa = any amino acid
 <400> 57
 Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
 Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala
                                   25
 Ala Ala
 <210> 58
 <211> 34
 <212> PRT
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence:fusion protein
       with Abeta epitope
 <220>
 <221> misc_feature
 <222> (3)
 <223> Xaa = any amino acid
 <400> 58
 Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Asp Ala Glu
 Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg
 His Asp
 <210> 59
<211> 20
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
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<220>
<221> misc_feature
<222> (10)
<223> Xaa = any amino acid
Asp Ala Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu
Lys Ala Ala Ala
<210> 60
<211> 24
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 60
Asp Ala Glu Phe Arg His Asp Ile Ser Gln Ala Val His Ala Ala His
Ala Glu Ile Asn Glu Ala Gly Arg
             20
<210> 61
<211> 24
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 61
Phe Arg His Asp Ser Gly Tyr Ile Ser Gln Ala Val His Ala Ala His
                  5
Ala Glu Ile Asn Glu Ala Gly Arg
             20
<210> 62
<211> 24
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
Glu Phe Arg His Asp Ser Gly Ile Ser Gln Ala Val His Ala Ala His
                  5
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Ala Glu Ile Asn Glu Ala Gly Arg 20

<210> 63

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
 with Abeta epitope

<400> 63

Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr Asp Ala Glu
1 5 10 15

Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg 20 25 30

His Asp

<210> 64

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fusion protein with Abeta epitope

<400> 64

Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu

1 5 10 15

Lys Leu Ala Thr Asp Ala Glu Phe Arg His Asp

<210> 65

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:fusion protein
 with Abeta epitope

<400> 65

Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala

Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu 20 25 30

Ala Thr

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<210> 66
<211> 27
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 66
Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Pro Lys
                  5
Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
<210> 67
<211> 79
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 67
Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu
Lys Leu Ala Thr Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser
Val Phe Asn Val Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile
Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro
Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe Arg His Asp
 <210> 68
 <211> 57
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
 <400> 68
 Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
                                      10
 Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly
                                   25
              20
 Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val
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Pro Lys Val Ser Ala Ser His Leu Glu
     50
<210> 69
<211> 44
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 69
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
                              40
<210> 70
<211> 51
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 70
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
              20
Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe
                                                   45
                              40
 Arg His Asp
      50
 <210> 71
 <211> 26
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence:synuclein
       fusion protein
 Glu Gln Val Thr Asn Val Gly Gly Ala Ile Ser Gln Ala Val His Ala
                                       10
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Ala His Ala Glu Ile Asn Glu Ala Gly Arg 20 25

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<210> 72
<211> 13
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Abeta 1-12
      peptide with inserted Cys residue
Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val Cys
  1
<210> 73
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Abeta 1-5
      peptide with inserted Cys residue
<400> 73
Asp Ala Glu Phe Arg Cys
  1
<210> 74
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Abeta 33-42
      peptide with inserted Cys residue
<220>
<221> MOD_RES
 <222> (2)
<223> Xaa = amino-heptanoic acid
Cys Xaa Gly Leu Met Val Gly Gly Val Val Ile Ala
                   5
  1
 <210> 75
 <211> 19
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: Abeta 13-28
       peptide with two Gly residues added and inserted
       Cys residue
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<220>
<221> MOD_RES
<222> (1)
<223> Xaa = N-acetyl His
<400> 75
Xaa His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
                  5
Gly Gly Cys
<210> 76
<211> 4
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence:linker
<400> 76
Glu Gly Glu Gly
  1 ·
<210> 77
<211> 22
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein with Abeta epitope
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                                      10
Ile Gly Ile Thr Glu Leu
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